

The Hawaii-based Longline Logbook Summary Report January–December 2011¹

Pacific Islands Fisheries Science Center
Fisheries Monitoring Branch

This annual report summarizes data on fish catch and fishing effort by Hawaii-based longline vessels for calendar year 2011. Results are based on the date gear was hauled, as reported by vessel operators to the National Marine Fisheries Service in federal logbooks of daily fishing activity. The report covers longline operations for fishing trips completed in 2011 and most, but not all, data from trips that began late in the fourth quarter of 2011 and continued into the first quarter of 2012. Therefore, the 2011 summary statistics reported here are preliminary.

During 2011, 129 vessels were active in the Hawaii-based fleet, five more vessels than in 2010 (Table 1, Fig. 1); participation in the fishery has been nearly constant over the past eight years. Longline fishers made 1,388 longline trips in 2011 (75 more than in 2010), including 1,306 using deep-set gear to target tuna (up 99 trips from 2010) and 82 using shallow-set gear to target swordfish (down 32 trips) (Table 1, Fig. 2). The Hawaii-based longline fishery deployed a record 42.2 million hooks in 2011, up 3.1 million hooks from 2010 (Table 1, Fig. 3). The number of hooks has been relatively steady over the past five years. A growing proportion of hooks are being set outside the U.S. Exclusive Economic Zone (EEZ) — 65% of the total hooks set in 2011. The remainder were deployed in the main Hawaiian Islands EEZ (22%), Northwestern Hawaiian Islands EEZ (11%), and in the EEZ of the Pacific Remote Island Areas (PRIA, consisting of U.S. possessions Wake Island, Jarvis Island, Howland Island, Baker Island, Kingman Reef, Palmyra Atoll, and Johnston Atoll) (2%).

In 2011, the Hawaii longline fleet caught 156,171 bigeye tuna (Table 1, Fig. 4), 14% more than in 2010. The trend of bigeye tuna catch has been upward since the first year of logbook monitoring in 1991. The albacore catch increased to 34,427 fish in 2011, well below the peak catch in 1997 but 66% higher than the albacore catch in 2010. The catch of yellowfin tuna more than doubled in 2011 to 31,629 fish.

The 2011 swordfish catch was 19,311 fish (Table 1, Fig. 5). This was 4% lower than the swordfish catch in 2010. The catch of striped marlin was 16,753 fish in 2011, a four-fold increase compared to 2010; an increase of this magnitude is consistent with the observed range of interannual variation over the 20-year period of logbook records. The catch of blue marlin in 2011 was 4,540 fish, up 31% from 2010. The catch of swordfish has been relatively stable for the past seven years while catches of striped marlin and blue marlin have varied.

In 2011, the Hawaii longline fleet caught 65,238 sharks and kept just 2% of them (Table 1, Fig. 6). Blue shark comprised 86% of the total shark catch (55,813 fish). The fleet also caught 3,226 mako sharks and 4,647 thresher sharks. Catches of mako and thresher sharks have

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trended upward, whereas the catch of blue shark has been relatively steady during the last nine years (Fig. 6).

In 2011, the Hawaii longline catch of other key pelagic species included 81,205 mahimahi, 33,443 pomfret, 38,680 oilfish, 17,904 moonfish, and 10,481 wahoo (Table 1, Fig. 7). Catches of mahimahi and oilfish (not shown in graph) have trended higher while the catch of pomfret has declined.

The longline logbook statistics reported above refer to all fishing areas combined. Summary catch and effort for 2011 were also compiled by several geographical sub-areas including: the MHI EEZ; the NWHI EEZ; the PRIA EEZ; the combined EEZ of MHI, NWHI and PRIA; and waters outside the U.S. EEZ. These statistics are presented in Tables 2-6. Summary statistics for the entire fishing area in 2011 are also presented for each distinct trip type: swordfish-targeted trips using shallow-set gear (Table 7) and tuna-targeted trips deploying deep-set gear (Table 8).

This report is available in PDF format on the PIFSC website at <http://www.pifsc.noaa.gov/fmb/reports.php>. The website also provides quarterly and yearly charts and an archive of quarterly and annual summary tables of fish catch and fishing effort from 1991 to the present. The statistics in the online graphs and archived tables are updated periodically as new records are added to the database and corrections are made.

Table 1. Annual summary report of fishing effort and catch statistics for U.S. longline vessels landing in Hawaii as derived for NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC Information Management System, Longline Logbook Data, 2/8/2012 1:14:56PM].

Report Coverage					Number of vessels active	129
Time Period	2011				Number of trips	1,388
Fishing Area	All Areas				Number of sets	18,623
Trip Types	All Trip Types				Number of hooks set	42,209,070

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	4,540	4,492	48	0.11
Striped marlin	16,753	16,495	258	0.40
Shortbill spearfish	15,723	15,517	206	0.37
Swordfish	19,311	17,165	2,146	0.46
Other billfishes	549	539	10	0.01
Total	56,876	54,208	2,668	1.35
Sharks				
Blue shark	55,813	358	55,455	1.32
Mako sharks	3,226	776	2,450	0.08
Thresher sharks	4,647	256	4,391	0.11
Oceanic whitetip shark	869	30	839	0.02
Silky shark	233	3	230	0.01
Other sharks	450	18	432	0.01
Total	65,238	1,441	63,797	1.55
Tunas				
Albacore	34,427	33,651	776	0.82
Bigeye tuna	156,171	153,410	2,761	3.70
Yellowfin tuna	31,629	30,878	751	0.75
Bluefin tuna	2	2	0	0.00
Skipjack tuna	25,791	24,996	795	0.61
Other tunas	30	20	10	0.00
Total	248,050	242,957	5,093	5.88
Other PMUS				
Mahimahi	81,205	79,405	1,800	1.92
Moonfish	17,904	17,743	161	0.42
Wahoo	10,481	10,432	49	0.25
Oilfish	38,680	37,838	842	0.92
Pomfret	33,443	32,890	553	0.79
Total	181,713	178,308	3,405	4.31
Total PMUS	551,877	476,914	74,963	13.07
Total Non-PMUS	4,376	2,550	1,826	0.10
Total All Species	556,253	479,464	76,789	13.18

Table 2. Annual summary report of fishing effort and catch statistics for U.S. longline vessels landing in Hawaii as derived for NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC Information Management System, Longline Logbook Data, 2/8/2012 1:14:56PM].

Report Coverage					Number of vessels active	125
Time Period	2011				Number of trips	629
Fishing Area	Main Hawaiian Islands EEZ				Number of sets	3,974
Trip Types	All Trip Types				Number of hooks set	9,137,822

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	903	894	9	0.10
Striped marlin	3,984	3,941	43	0.44
Shortbill spearfish	3,158	3,130	28	0.35
Swordfish	953	754	199	0.10
Other billfishes	123	119	4	0.01
Total	9,121	8,838	283	1.00
Sharks				
Blue shark	12,027	111	11,916	1.32
Mako sharks	505	228	277	0.06
Thresher sharks	780	57	723	0.09
Oceanic whitetip shark	192	11	181	0.02
Silky shark	29	1	28	0.00
Other sharks	136	14	122	0.01
Total	13,669	422	13,247	1.50
Tunas				
Albacore	4,081	4,060	21	0.45
Bigeye tuna	26,804	26,153	651	2.93
Yellowfin tuna	8,490	8,203	287	0.93
Bluefin tuna	0	0	0	0.00
Skipjack tuna	5,320	5,237	83	0.58
Other tunas	1	1	0	0.00
Total	44,696	43,654	1,042	4.89
Other PMUS				
Mahimahi	14,779	14,492	287	1.62
Moonfish	1,878	1,867	11	0.21
Wahoo	1,289	1,276	13	0.14
Oilfish	7,401	7,298	103	0.81
Pomfret	8,321	8,146	175	0.91
Total	33,668	33,079	589	3.68
Total PMUS	101,154	85,993	15,161	11.07
Total Non-PMUS	1,934	1,641	293	0.21
Total All Species	103,088	87,634	15,454	11.28

Table 3. Annual summary report of fishing effort and catch statistics for U.S. longline vessels landing in Hawaii as derived for NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC Information Management System, Longline Logbook Data, 2/8/2012 1:14:56PM].

Report Coverage					Number of vessels active	107
Time Period	2011				Number of trips	290
Fishing Area	Northwestern Hawaiian Islands EEZ				Number of sets	2,115
Trip Types	All Trip Types				Number of hooks set	4,732,408

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	633	623	10	0.13
Striped marlin	3,493	3,420	73	0.74
Shortbill spearfish	2,799	2,747	52	0.59
Swordfish	2,019	1,667	352	0.43
Other billfishes	103	103	0	0.02
Total	9,047	8,560	487	1.91
Sharks				
Blue shark	9,560	19	9,541	2.02
Mako sharks	396	118	278	0.08
Thresher sharks	303	58	245	0.06
Oceanic whitetip shark	135	8	127	0.03
Silky shark	9	0	9	0.00
Other sharks	49	1	48	0.01
Total	10,452	204	10,248	2.21
Tunas				
Albacore	7,052	7,019	33	1.49
Bigeye tuna	17,507	16,993	514	3.70
Yellowfin tuna	4,481	4,380	101	0.95
Bluefin tuna	0	0	0	0.00
Skipjack tuna	4,252	4,016	236	0.90
Other tunas	0	0	0	0.00
Total	33,292	32,408	884	7.03
Other PMUS				
Mahimahi	8,717	8,399	318	1.84
Moonfish	1,260	1,255	5	0.27
Wahoo	739	734	5	0.16
Oilfish	5,506	5,346	160	1.16
Pomfret	2,343	2,332	11	0.50
Total	18,565	18,066	499	3.92
Total PMUS	71,356	59,238	12,118	15.08
Total Non-PMUS	346	195	151	0.07
Total All Species	71,702	59,433	12,269	15.15

Table 4. Annual summary report of fishing effort and catch statistics for U.S. longline vessels landing in Hawaii as derived for NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC Information Management System, Longline Logbook Data, 2/8/2012 1:14:56PM].

Report Coverage					Number of vessels active	51
Time Period	2011				Number of trips	72
Fishing Area	Pacific Remote Island Areas (PRIA) EEZ				Number of sets	357
Trip Types	All Trip Types				Number of hooks set	884,145

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	195	195	0	0.22
Striped marlin	390	384	6	0.44
Shortbill spearfish	295	291	4	0.33
Swordfish	91	89	2	0.10
Other billfishes	20	19	1	0.02
Total	991	978	13	1.12
Sharks				
Blue shark	1,045	13	1,032	1.18
Mako sharks	35	4	31	0.04
Thresher sharks	110	4	106	0.12
Oceanic whitetip shark	241	3	238	0.27
Silky shark	151	0	151	0.17
Other sharks	24	2	22	0.03
Total	1,606	26	1,580	1.82
Tunas				
Albacore	998	996	2	1.13
Bigeye tuna	4,082	4,032	50	4.62
Yellowfin tuna	2,560	2,540	20	2.90
Bluefin tuna	0	0	0	0.00
Skipjack tuna	1,056	971	85	1.19
Other tunas	0	0	0	0.00
Total	8,696	8,539	157	9.84
Other PMUS				
Mahimahi	578	574	4	0.65
Moonfish	111	110	1	0.13
Wahoo	643	642	1	0.73
Oilfish	730	716	14	0.83
Pomfret	1,044	1,043	1	1.18
Total	3,106	3,085	21	3.51
Total PMUS	14,399	12,628	1,771	16.29
Total Non-PMUS	102	15	87	0.12
Total All Species	14,501	12,643	1,858	16.40

Table 5. Annual summary report of fishing effort and catch statistics for U.S. longline vessels landing in Hawaii as derived for NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC Information Management System, Longline Logbook Data, 2/8/2012 1:14:56PM].

Report Coverage					Number of vessels active	128
Time Period	2011				Number of trips	833
Fishing Area	Hawaiian Islands EEZ + PRIA EEZ				Number of sets	6,446
Trip Types	All Trip Types				Number of hooks set	14,754,375

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	1,731	1,712	19	0.12
Striped marlin	7,867	7,745	122	0.53
Shortbill spearfish	6,252	6,168	84	0.42
Swordfish	3,063	2,510	553	0.21
Other billfishes	246	241	5	0.02
Total	19,159	18,376	783	1.30
Sharks				
Blue shark	22,632	143	22,489	1.53
Mako sharks	936	350	586	0.06
Thresher sharks	1,193	119	1,074	0.08
Oceanic whitetip shark	568	22	546	0.04
Silky shark	189	1	188	0.01
Other sharks	209	17	192	0.01
Total	25,727	652	25,075	1.74
Tunas				
Albacore	12,131	12,075	56	0.82
Bigeye tuna	48,393	47,178	1,215	3.28
Yellowfin tuna	15,531	15,123	408	1.05
Bluefin tuna	0	0	0	0.00
Skipjack tuna	10,628	10,224	404	0.72
Other tunas	1	1	0	0.00
Total	86,684	84,601	2,083	5.88
Other PMUS				
Mahimahi	24,074	23,465	609	1.63
Moonfish	3,249	3,232	17	0.22
Wahoo	2,671	2,652	19	0.18
Oilfish	13,637	13,360	277	0.92
Pomfret	11,708	11,521	187	0.79
Total	55,339	54,230	1,109	3.75
Total PMUS	186,909	157,859	29,050	12.67
Total Non-PMUS	2,382	1,851	531	0.16
Total All Species	189,291	159,710	29,581	12.83

Table 6. Annual summary report of fishing effort and catch statistics for U.S. longline vessels landing in Hawaii as derived for NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC Information Management System, Longline Logbook Data, 2/8/2012 1:14:56PM].

Report Coverage					Number of vessels active	128
Time Period	2011				Number of trips	1,120
Fishing Area	Outside U.S. EEZ				Number of sets	12,175
Trip Types	All Trip Types				Number of hooks set	27,454,695

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	2,809	2,780	29	0.10
Striped marlin	8,886	8,750	136	0.32
Shortbill spearfish	9,471	9,349	122	0.34
Swordfish	16,248	14,655	1,593	0.59
Other billfishes	303	298	5	0.01
Total	37,717	35,832	1,885	1.37
Sharks				
Blue shark	33,181	215	32,966	1.21
Mako sharks	2,290	426	1,864	0.08
Thresher sharks	3,454	137	3,317	0.13
Oceanic whitetip shark	301	8	293	0.01
Silky shark	44	2	42	0.00
Other sharks	241	1	240	0.01
Total	39,511	789	38,722	1.44
Tunas				
Albacore	22,296	21,576	720	0.81
Bigeye tuna	107,778	106,232	1,546	3.93
Yellowfin tuna	16,098	15,755	343	0.59
Bluefin tuna	2	2	0	0.00
Skipjack tuna	15,163	14,772	391	0.55
Other tunas	29	19	10	0.00
Total	161,366	158,356	3,010	5.88
Other PMUS				
Mahimahi	57,131	55,940	1,191	2.08
Moonfish	14,655	14,511	144	0.53
Wahoo	7,810	7,780	30	0.28
Oilfish	25,043	24,478	565	0.91
Pomfret	21,735	21,369	366	0.79
Total	126,374	124,078	2,296	4.60
Total PMUS	364,968	319,055	45,913	13.29
Total Non-PMUS	1,994	699	1,295	0.07
Total All Species	366,962	319,754	47,208	13.37

Table 7. Annual summary report of fishing effort and catch statistics for U.S. longline vessels landing in Hawaii as derived for NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC Information Management System, Longline Logbook Data, 2/8/2012 1:14:56PM].

Report Coverage					Number of vessels active	20
Time Period	2011				Number of trips	82
Fishing Area	All Areas				Number of sets	1,468
Trip Types	Swordfish Targeted Trips				Number of hooks set	1,489,243

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	116	110	6	0.08
Striped marlin	572	513	59	0.38
Shortbill spearfish	192	163	29	0.13
Swordfish	16,405	14,663	1,742	11.02
Other billfishes	8	5	3	0.01
Total	17,293	15,454	1,839	11.61
Sharks				
Blue shark	7,857	19	7,838	5.28
Mako sharks	984	65	919	0.66
Thresher sharks	112	4	108	0.08
Oceanic whitetip shark	78	3	75	0.05
Silky shark	1	0	1	0.00
Other sharks	62	0	62	0.04
Total	9,094	91	9,003	6.11
Tunas				
Albacore	2,982	2,480	502	2.00
Bigeye tuna	1,050	953	97	0.71
Yellowfin tuna	317	299	18	0.21
Bluefin tuna	0	0	0	0.00
Skipjack tuna	47	43	4	0.03
Other tunas	12	2	10	0.01
Total	4,408	3,777	631	2.96
Other PMUS				
Mahimahi	6,413	5,681	732	4.31
Moonfish	207	110	97	0.14
Wahoo	35	29	6	0.02
Oilfish	2,498	1,999	499	1.68
Pomfret	103	80	23	0.07
Total	9,256	7,899	1,357	6.22
Total PMUS	40,051	27,221	12,830	26.89
Total Non-PMUS	115	19	96	0.08
Total All Species	40,166	27,240	12,926	26.97

Table 8. Annual summary report of fishing effort and catch statistics for U.S. longline vessels landing in Hawaii as derived for NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC Information Management System, Longline Logbook Data, 2/8/2012 1:14:56PM].

Report Coverage					Number of vessels active	129
Time Period	2011				Number of trips	1,306
Fishing Area	All Areas				Number of sets	17,155
Trip Types	Tuna Targeted Trips				Number of hooks set	40,719,827

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	4,424	4,382	42	0.11
Striped marlin	16,181	15,982	199	0.40
Shortbill spearfish	15,531	15,354	177	0.38
Swordfish	2,906	2,502	404	0.07
Other billfishes	541	534	7	0.01
Total	39,583	38,754	829	0.97
Sharks				
Blue shark	47,956	339	47,617	1.18
Mako sharks	2,242	711	1,531	0.06
Thresher sharks	4,535	252	4,283	0.11
Oceanic whitetip shark	791	27	764	0.02
Silky shark	232	3	229	0.01
Other sharks	388	18	370	0.01
Total	56,144	1,350	54,794	1.38
Tunas				
Albacore	31,445	31,171	274	0.77
Bigeye tuna	155,121	152,457	2,664	3.81
Yellowfin tuna	31,312	30,579	733	0.77
Bluefin tuna	2	2	0	0.00
Skipjack tuna	25,744	24,953	791	0.63
Other tunas	18	18	0	0.00
Total	243,642	239,180	4,462	5.98
Other PMUS				
Mahimahi	74,792	73,724	1,068	1.84
Moonfish	17,697	17,633	64	0.43
Wahoo	10,446	10,403	43	0.26
Oilfish	36,182	35,839	343	0.89
Pomfret	33,340	32,810	530	0.82
Total	172,457	170,409	2,048	4.24
Total PMUS	511,826	449,693	62,133	12.57
Total Non-PMUS	4,261	2,531	1,730	0.10
Total All Species	516,087	452,224	63,863	12.67

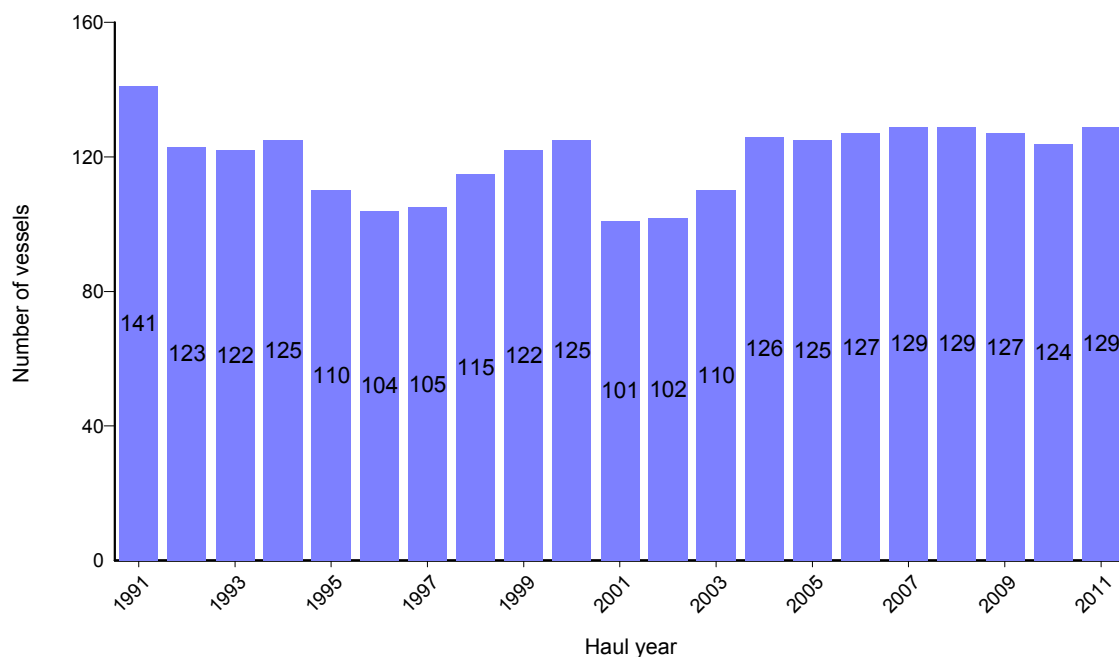


Figure 1. Number of active longline vessels based and landing in Hawaii, by year, 1991-2011. [PIFSC IMS, Longline Logbook Data, 2/15/2012 8:08:29AM]

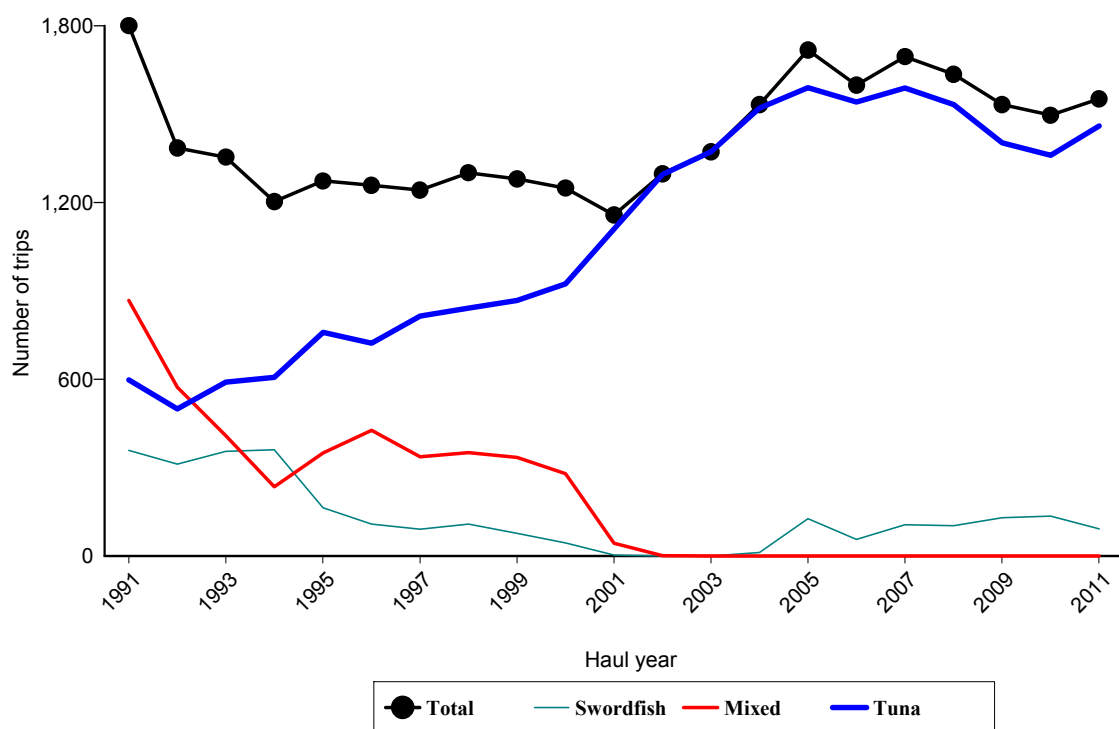


Figure 2. Number of fishing trips by longline vessels based and landing in Hawaii, by year and trip type, 1991-2011. [PIFSC IMS, Longline Logbook Data, 2/15/2012 8:08:29AM]

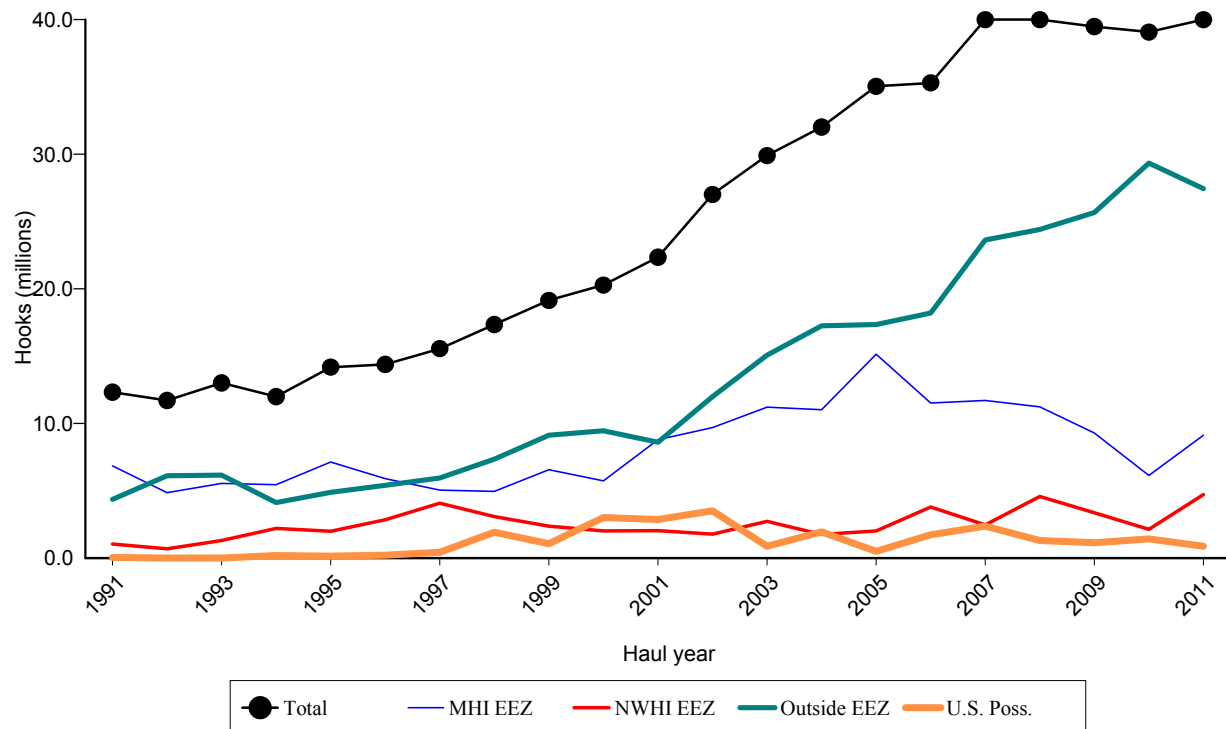


Figure 3. Number of hooks set by longline vessels based and landing in Hawaii, by year and fishing area, 1991-2011. [PIFSC IMS, Longline Logbook Data, 2/15/2012 8:08:34AM]

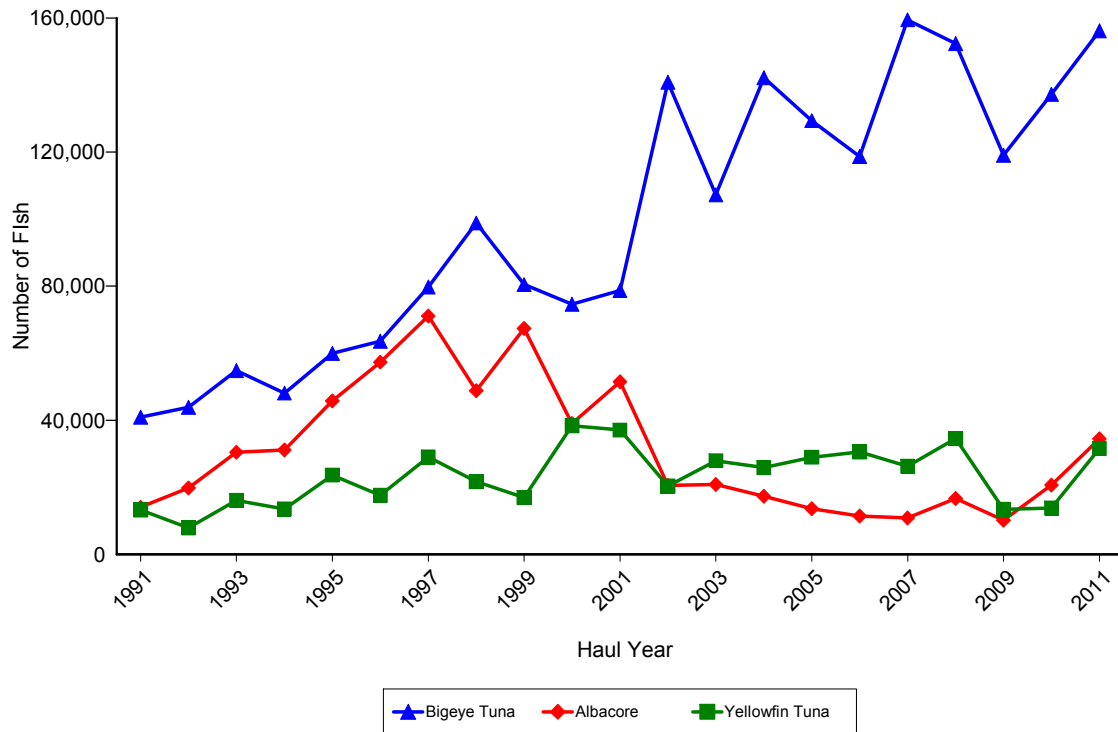


Figure 4. Annual catch of albacore, bigeye tuna, and yellowfin tuna by longline vessels based and landing in Hawaii, .1991-2011 2/15/2012 8:08:57AM]

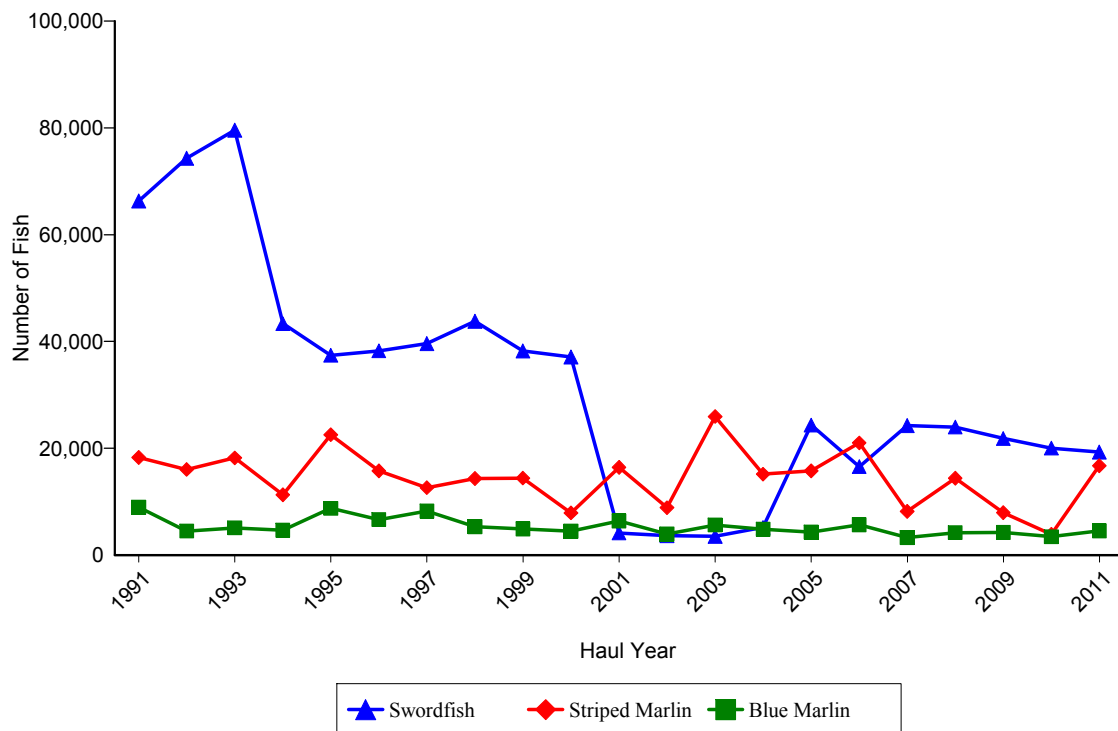


Figure 5. Annual catch of blue marlin, striped marlin, and swordfish by longline vessels based and landing in Hawaii, 1991-2011. [PIFSC IMS, Longline Logbook Data, 2/15/2012 8:08:57AM]

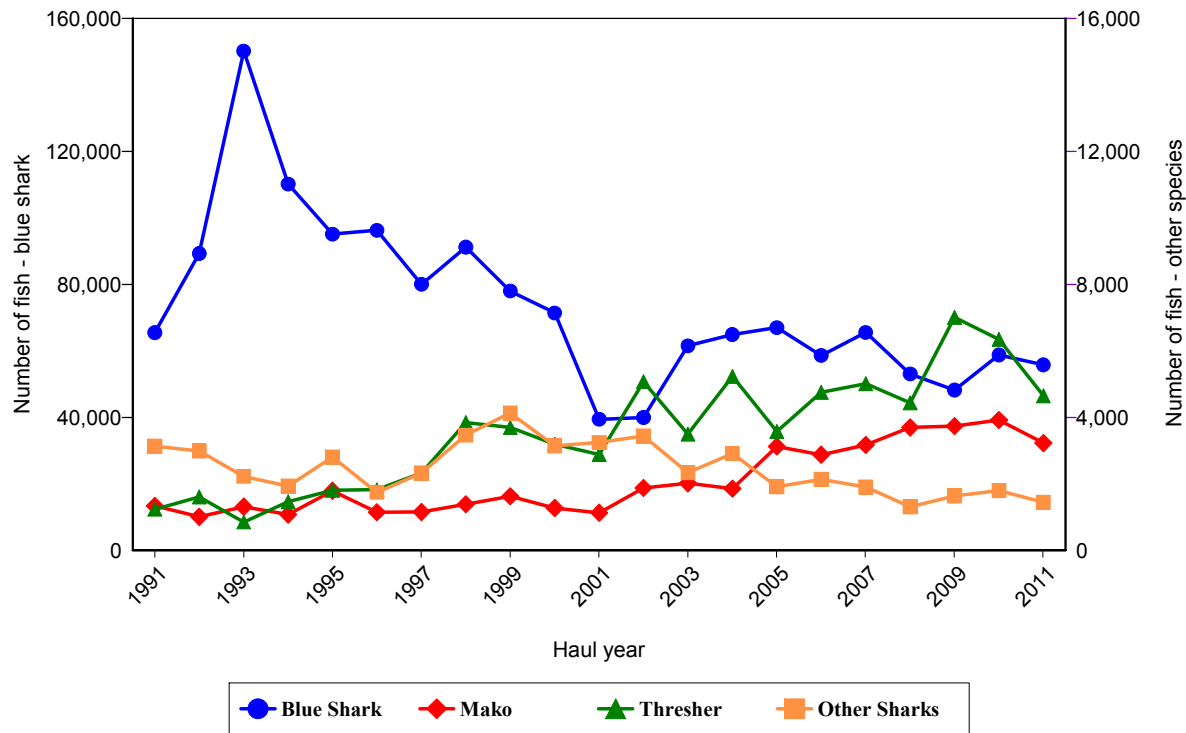


Figure 6. Annual catch of blue shark, mako shark, thresher shark, and other sharks by longline vessels based and landing in Hawaii, 1991-2011. [PIFSC IMS, Longline Logbook Data, 2/15/2012 8:08:57AM]

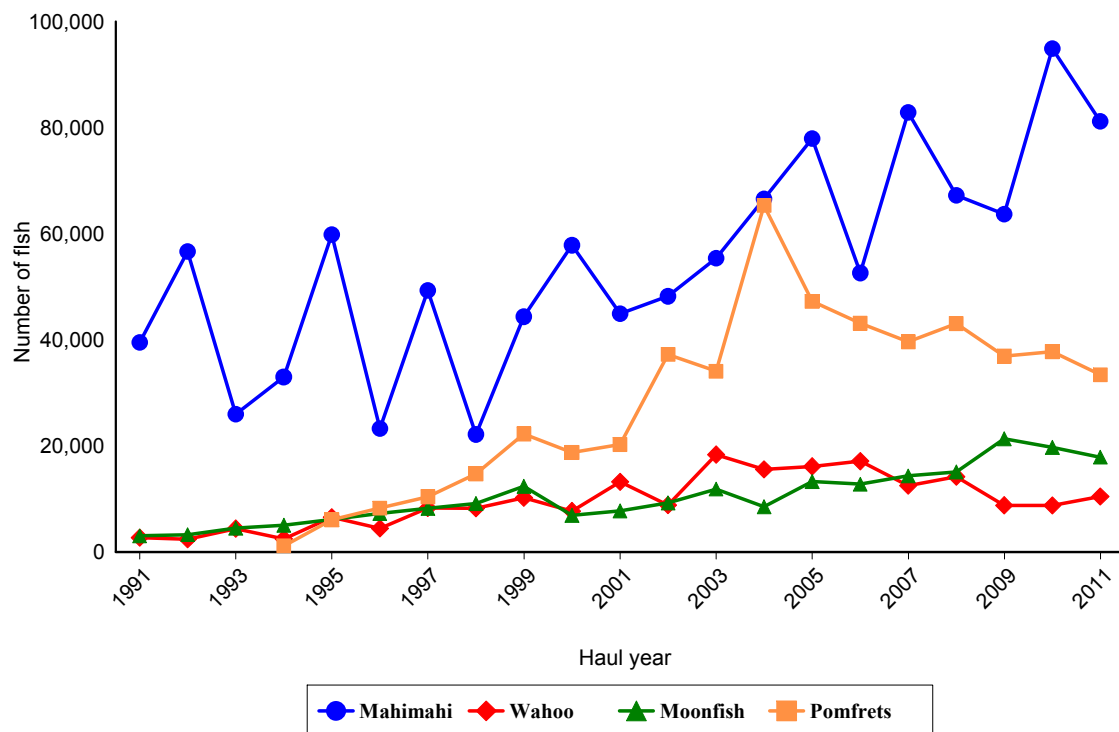


Figure 7. Annual catch of mahimahi, moonfish, pomfret, and wahoo by longline vessels based and landing in Hawaii, 1991-2011. [PIFSC IMS, Longline Logbook Data, 2/15/2012 8:08:57AM]